REMARKS/ARGUMENTS

Reconsideration is respectfully requested.

Claims 1-15 are pending (of which claims 4-14 are withdrawn) before the present amendment. No claim has been amended by the present amendment.

In the office action, claims 1-3 and 15 stand rejected under 35 U.S.C. §102, ¶1, as failing to comply with the written description requirement.

The applicants respectfully **disagree**.

The examiner allegedly indicates that the specification does not describe that the --substrate is hot enough to evaporate the liquid organic EL material not yet discharged-- and --prevents air-drying--. However, the applicants respectfully point out that the above claimed subject matters are sufficiently described and explained in the specification, even though the same claim words may not have been used in the specification. The specific sections of the specification, which describe the claimed subject matters, are as follows:

The evaporation of --the liquid organic EL material not yet discharged-- is described in page 13, lines 15 to page 14, line 11. More specifically, in page 13, lines 17 to 22, the specification teaches that "when a stage is heated previously to constant temperature, a nozzle is also heated by its radiation heat and a solvent is evaporated, by this, concentration of an ink changes and conditions for discharge of an ink vary remarkably, and additionally, a nozzle is clogged, to cause poor discharging". Also, in page 12, lines 10 to 13 of the specification, to prevent this trouble deriving from the change of the ink concentration, "a nozzle cooling temperature adjusting mechanism was provided."

Further, in Example 1, in which the nozzle was cooled by the nozzle cooling temperature controlling mechanism to be 25°C to 30°C, organic EL display was produced in good condition. To the contrary, in Comparative Example 2, in which the temperature of the nozzle was not controlled, poor ink discharge occurred in a large number so that an organic EL display could not be manufactured. These facts prove that, when the nozzle is not cooled, the nozzle and "the liquid organic EL material not yet discharged" are heated by the radiation heat from "the substrate", and the solvent in the ink is "evaporated" causing a change in the concentration of the ink.

The "air-drying" is described in page 10, line 14 to page 11, line 23. These lines teach that the air drying (evaporation of the solvent from the surface of the liquid drop) is the cause of uneven film thickness (Fig. 8 and description thereof); in drying of small size liquid drop, because of the ratio between its surface area and volume, evaporation of a solvent from the surface is dominant; and by the –forcible drying– (forcible evaporation of a solvent from inside of a liquid drop), uneven film thickness can be prevented (Fig. 7 and description thereof).

When the above-mentioned forcible drying is not carried out, most of the solvent in the liquid drop is evaporated from the surface by the air drying. However, in the present invention, even film thickness is realized by forcible drying (promoting evaporation of the solvent from inside of the liquid drop) carried out in order to prevent air drying. Moreover, to prevent the air drying effectively, page 11, lines 18 to 21 teaches "to dry by heating immediately after discharge, at most within 60 seconds".

Further, in Example 1, in which the temperature of the substrate is 100°C, poor emission derived from uneven thickness of an EL layer did not occur. To the contrary,

in Comparative Example 1, in which a stage was not heated, poor emission derived from uneven thickness of an EL layer occurred in a large number. These facts prove that, because the substrate was heated to 100°C, the EL material was forcibly dried immediately after being discharged. Therefore, "air drying" of the discharged organic EL material is "prevented", as stated in claim 1. As a result, organic EL layer having even film thickness was obtained.

Accordingly, it is respectfully submitted that the subject matter as claimed in claim 1 is sufficiently described and explained in the specification. Withdrawal of the rejection under §112, ¶1, is respectfully requested.

In the office action, claims 1 and 3 stand rejected under 35 U.S.C. §103(a) as being obvious over WO 98/24271 (Miyashita) in view of WO 01/70506 (Kawase).

However, heating of a substrate known in the art of ink-jet printing, which the examiner mentions, is carried out in order to promote evaporation of a solvent from surface of an ink liquid drop. Also in Kawase, heating of a substrate is carried out to promote air drying. Therefore, the heating temperature is not high, and the temperature is much lower than the boiling point of a solvent used in an ink. Even though a specific heating temperature is not disclosed in Kawase, it teaches that "when high boiling point solvents are used it is likely to be necessary to use substrate heating in addition to `the gas flow (the last 2 lines of page 10)". That means, the heating temperature is such that when low boiling point solvents are used, the heating of the substrate is not carried out.

To the contrary, the heating of the substrate In the presently claimed invention is not carried out to promote evaporation of solvents from surface of a liquid drop. That is, the heating of the substrate in the presently claimed invention is carried out to promote

forcible evaporation, from inside of a liquid drop, of a solvent (page 11, lines 4 and 5), in order to prevent evaporation from the surface. Therefore, the heating temperature in the present invention is so high that "substrate is hot enough to evaporate the liquid organic EL material present in the nozzle not yet discharged". Thus, the heating temperature in the present invention is much higher than the conventional temperature which promotes evaporation of a solvent from surface of a liquid droplet.

As mentioned above, the heating temperature in the presently claimed invention is much higher than any conventional temperature including Kawase. By heating the substrate to such high temperature, the forcible drying from inside of a liquid drop is possible so that the peculiar effect to the present invention, that organic EL layer having even film thickness is formed, can be realized.

Therefore, the presently claimed invention is not obvious by combing Miyashita (which merely describes a method for manufacturing organic EL display by the ink jet method) and Kawase (which describes the heating to promote air drying).

For the reasons set forth above, the applicants respectfully submit that claims 1-3, 11, and 15 are in condition for allowance. The examiner is respectfully advised that that allowability of an independent claim precludes restriction of its dependent claims. That is, when an independent claim is found allowable, all withdrawn dependent claims should also be found allowable, and restriction on those dependent claims should be withdrawn. When issuance of a Notice of Allowance is proper in the next action, the examiner is authorized to cancel the non-allowable withdrawn claims, for which the applicant reserves the right to file a divisional application.

This amendment is considered to be responsive to all points raised in the office

action. Should the examiner have any remaining questions or concerns, the examiner is encouraged to contact the undersigned attorney by telephone to expeditiously resolve such concerns.

Respectfully submitted,

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